

# InteGreyted International

104 Jamesville Road, Syracuse, New York 13214

Phone (315) 445-0224

Fax (315) 445-0793

28 April 2004

Richard A. Mustico, P.E.  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Bureau of Central Remedial Action, 12<sup>th</sup> Floor  
625 Broadway  
Albany, New York 12233-7016

Re: Draft Preliminary Site Assessment Work Plan: Response to Comments  
Crouse-Hinds Facility, Syracuse, NY  
Site No. 7-34-049  
InteGreyted Project No. 0310025P

Dear Mr. Mustico:

On behalf of Cooper Industries, Inc. (Cooper), InteGreyted International, LLC (InteGreyted) provides this response to the Department's 30 March 2004 letter commenting on the Draft Preliminary Site Assessment (PSA) Work Plan (dated 9 January 2004) for the referenced site. For convenience, this letter presents each of the Department's comments followed by a response. In addition, revised pages of the PSA Work Plan are attached so that they may be substituted with the appropriate pages of the previously submitted PSA Work Plan dated 9 January 2004 (See Attachment A).

## General Comments:

1. *The PSA should include a reconnaissance of the site to determine the presence of any seeps emanating from the landfills. Surface water/sediment samples should be collected from any identified seeps.*

**Response:** Section 3.2.3 of the Work Plan indicates that a reconnaissance of the landfills will be conducted to document the presence of drainage swales and to estimate if significant leachate releases and/or affected soil and sediment are present. The section also indicates that soil samples and/or sediment sampling locations will be selected based on field observations. Surface soil/sediment samples collected from leachate seeps, if any, are considered to be part of the 10 surface soil samples proposed in the Work Plan. In the event that leachate seeps are observed, a surface water sample will be collected along with a soil/sediment sample at these locations if sufficient water / leachate volume is available to allow for proper sample collection. Surface water samples will be analyzed for the same analyte list as the soil/sediment samples.

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2. ***Main Text and Attachment 2 SAP.*** *The discharge of development water and purge water on-site unless a sheen or free product is observed is not acceptable for wells screened in the deep aquifer. In addition to visibly contaminated development and purge water from the shallow aquifer, all development and purge waters from the deep aquifer should be collected and characterized to identify the appropriate means of disposal.*

**Response:** Agreed. All development and purge water from the deep aquifer and any visibly impacted water from the shallow aquifer will be containerized and characterized (by laboratory analyses) for future proper management and disposal. Analytical results will be used to determine the proper approach to purge water / development water management, such as treatment at the facility's Waste Water Treatment Plant.

3. ***Future documents should consider potential impacts to cultural resources through site remediation. While this site is not currently a subsite to the Onondaga Lake NPL Site, EPA is available to provide comments and recommendations as to the need for and scope of any needed cultural resource investigations.***

**Response:** The need for an evaluation of potential impacts to cultural resources will be considered and evaluated at such a time when, and if, it is appropriate.

4. ***The New York State Department of Health Generic Community Air Monitoring Plan was E-mailed to Mr. Michael O'Brien of Cooper Industries on March 29, 2004. Please incorporate this plan into the revised PSA Work Plan.***

**Response:** A Community Air Monitoring Plan will be incorporated into the Work Plan and is provided as Attachment B of this response letter.

**Specific Comments:**

5. ***Section 3.0 Preliminary Site Assessment Scope of Work, page 3-1. The Work Plan should identify the objectives of the PSA. The objectives should include the following:***

- *collect the data necessary to determine the presence of hazardous wastes and/or hazardous substances in site media;*
- *collect data to aid in determining if the site is a source of hazardous wastes and/or hazardous substance contamination to Ley Creek and/or Onondaga Lake;*

- *collect sufficient data to determine whether a Remedial Investigation/Feasibility Study is warranted for the site; and*
- *collect the data necessary to perform Steps 1 through 2b of the Fish and Wildlife Impact Analysis (FWIA).*

**Response:** The stated objectives of the PSA will be added to Section 3.0 of the Work Plan as follows (please note the minor adjustments to the Department's suggested text):

- *collect the data necessary to determine the presence or absence of hazardous wastes and/or hazardous substances in site media;*
  - *collect data to aid in determining if the site may or may not be a source of hazardous wastes and/or hazardous substance contamination to Ley Creek and/or Onondaga Lake;*
  - *collect sufficient data to determine whether or not a Remedial Investigation/Feasibility Study is warranted for the site; and*
  - *collect the data necessary to perform Steps 1 through 2b of the Fish and Wildlife Impact Analysis (FWIA).*
6. ***Section 3.3.1 Existing Monitoring Wells, page 3-6. If the existing wells are no longer useable, then there should be a contingency to replace them with new wells.***

**Response:** In the Fall of 2003, a well survey was conducted to verify the location of onsite monitoring wells and their integrity. The survey determined that all wells were useable. The report describing this effort was provided to NYSDEC on 30 October 2003. During the course of the PSA, should it be found that a well has become unusable, provisions will be made to repair / replace the well at that time.

7. ***Section 3.3.2 Test Pit Excavation Soil Sampling, page 3-4. The last sentence should be rewritten to read, "Additionally, ten soil samples from interior area test pits will be collected....".***

**Response:** Agreed. The text will be revised.

8. ***Section 3.2.3 Surface Soil Sampling, page 3-5. Soil should be collected at the 0-6 and 6-12 inch intervals at all of the surface soil locations. If any of the soil samples are taken in drainage swales that contain water than a co-located surface water sample should be collected. On the South Landfill, at least three soil samples should target the edge of the landfill***

*by Ley Creek. These samples should be evenly spaced along the edge of the landfill.*

**Response:** Based on requirements for surface soil sampling presented in NYSDEC's Draft DER-10, Technical Guidance for Site Investigation and Remediation (dated December 2002), the Work Plan has met the requirements for sampling as presented in Section 1.5 by proposing to collect and analyze soil samples from the 0 to 6-inch depth intervals at each location. Sampling and analysis of soils below this interval is not specified in DER-10 and would not meet the definition of surface soils as specified in DER-10. Accordingly, InteGreyted does not see the justification for the collection and analysis of additional soil samples at the 6-inch to 12-inch depth intervals at this time. The need for deeper samples can be evaluated in the PSA report based on the results of PSA sampling and analyses.

If soil samples are collected in drainage swales that contain surface water, a co-located surface water sample will also be collected (if possible) and analyzed for the same analyte list as the soil sample.

Three of the ten proposed surface soil samples will be located evenly along the edge of the south landfill by Ley Creek.

9. *Section 3.3.2 Monitoring Well Installations, page 3-7. Since monitoring well W-4A does not appear to be an upgradient well in the shallow aquifer during the winter months and is installed in fill containing foundry waste, this well should not be considered as a background well, as recommended in the Thomsen Associates report. Also, since monitoring well W-4B is the only deep aquifer downgradient well during the summer months, the installation of one or two additional deep wells on the northeast side of the North Landfill should be considered. In the South Landfill, there are only three monitoring wells and it is unclear which aquifer(s) they are screened in. Additional wells may be needed in the South Landfill to fully characterize the extent of groundwater contamination in this area. Also, no wells were proposed for the areas of the site between the fill and Ley Creek, and such wells should be considered? This section should discuss the rationale for the placement and number of wells as it relates to PSA data needs.*

**Response:** InteGreyted believes that the scope of well installation activities is appropriate for a PSA. The results of the PSA and hydrogeologic investigation tasks will indicate if additional wells are necessary to accurately define groundwater conditions at the site. Based on the findings of the PSA, additional wells may or may not be required.

However, InteGreyted prefers to reserve that determination until the PSA is completed.

As part of the PSA, monitoring well 4A will be abandoned and relocated to an area that is located near the southeast corner of the North Landfill property and which is outside of fill materials. The location of this well will be determined in the field based on access considerations and observations of the presence and absence of fill in the area.

The location of the well pair proposed on the northeast side of the North Landfill is to provide shallow and deep groundwater data in an area where groundwater data is lacking. This well pair should help to refine groundwater conditions on this side of the landfill and should help to determine if groundwater in this area of the site represents background conditions.

The location of the well pair proposed in the southwest corner of the site is to provide groundwater flow and quality data in the corner of the property between the landfill and Ley Creek.

The location of the shallow well proposed along the northwest edge of the site is to provide groundwater flow and quality data along the edge of the property between the landfill and Ley Creek.

10. *Section 3.3.2 Monitoring Well Installations, page 3-7. The text states that the auger cuttings will be logged by a geologist, and that split-spoon samples will not be collected during well installation activities unless high PID readings are encountered. The text should be rewritten to include continuous split spoon sampling, and the logging of the split spoons by the on-site geologist.*

**Response:** As discussed with NYSDEC on 27 April 2004, split-spoon samples will be collected continuously in the deep boring at each proposed monitoring well pair and at the location of the proposed shallow well, which is not paired with a deep well.

11. *Section 3.3.4 Groundwater Sampling, page 3-8, paragraph 2 and Attachment 2, SAP, Section 2.3.4 Groundwater Sampling, page 2-5, paragraph 3. Low-flow sampling should be employed for groundwater sampling. Purging rates should be 200- 500 ml/min according to EPA Region II's low stress groundwater purging and sampling procedure.*

**Response:** Low flow sampling will be employed, according to EPA procedures, for all groundwater-sampling activities.

12. *Section 3.4 Ley Creek Sampling, page 3-9. All sediment samples should be collected at the 0-6 inch and 6-12 inch intervals. Depositional areas should be targeted for sampling locations. All sediment samples should be tested for total organic carbon using the Lloyd Kahn method. Flow conditions in Ley Creek at the time of collection should be noted, if possible sampling should be conducted during low-flow conditions.*

**Response:** InteGreyted believes that sampling of the 0 to 6-inch depth interval is sufficient to meet the data requirements of the PSA. Additional sampling of the 6-inch to 12-inch depth interval is not justified at this time and is not required by guidance specified in DER-10. Furthermore, sampling conducted by the Department in Ley Creek resulted in the collection of one sample per location.

Depositional areas will be targeted for sampling in Ley Creek.

Sediment samples will also be analyzed for TOC by the specified analytical method.

Flow conditions in Ley Creek will be noted at the time of sampling and if possible sampling will be conducted during low flow conditions.

13. *Section 3.5 Storm Sewer Assessment, page 3-10. If the storm sewer discharge point to Ley Creek is not located one additional sediment sample should be collected along the border of the South Landfill. Sample collection and analysis should be the same as for the Ley Creek sediment sampling.*

**Response:** In the event that the storm sewer discharge point is not located, the sample proposed for that location will be relocated and collected along the border of the South Landfill.

14. *Section 3.7 Data Evaluation, page 3-11. Results of the surface water sampling should be compared to water quality standards. Sediment sampling results should be compared with the "Technical Guidance for Screening Contaminated Sediments" (<http://www.dec.state.ny.us/website/dfwmr/habitat/seddoc.pdf>). For purposes of step 2b of the FWIA the soil results should be compared with ecological benchmarks.*

**Response:** Surface water analytical data will be compared to standards that are appropriate for the class of waters where the samples were collected. Sediment samples will be compared to the referenced guidance. For the purpose of the FWIA, soil results will be compared to the appropriate ecological benchmarks.

15. *Attachment 3, QAPP, Section 1.0 Introduction, page 1-1. This section should cite appropriate guidance documents used to develop the QAPP (e.g. "EPA Requirements for the Preparation of Quality Assurance Project Plans", EPA QA/R-5, Interim Final, November 1999).*

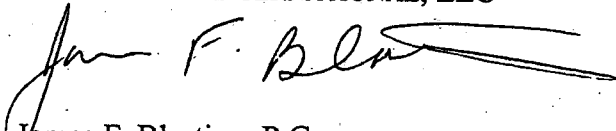
**Response:** Agreed. Citations will be added as appropriate.

16. *Attachment 3, QAPP, Table 6-1 PSA Sampling Program, page 6-2. This table should include the proposed test pit samples discussed in the QAPP, Section 2.2.2 which will be collected and analyzed by the Toxicity Characteristics Leaching Procedure (TCLP).*

**Response:** Agreed. The table will be modified.

Thank you for your consideration of this response. Cooper and InteGreyted would like to discuss this response with you prior to amending the Work Plan. Once we have discussed these items and agreed to revisions, we will submit a revised PSA Work Plan consistent with that agreement. In the meantime, feel free to contact me at (315) 445-0224 or by email ([jblasting@integreyted.com](mailto:jblasting@integreyted.com)) if you have any questions or need additional information.

Sincerely,  
INTEGREYTED INTERNATIONAL, LLC



James F. Blasting, P.G.  
Vice President

cc: Mr. Michael O'Brien, Cooper

**ATTACHMENT B**  
**COMMUNITY AIR MONITORING PLAN**



**ATTACHMENT A**  
**REVISED WORK PLAN PAGES**

### **3.0 PRELIMINARY SITE ASSESSMENT SCOPE OF WORK**

The objectives of the PSA are to: 1) collect the data necessary to determine the presence or absence of hazardous wastes and/or hazardous substances in site media; 2) collect data to aid in determining if the site may or may not be a source of hazardous wastes and/or hazardous substance contamination to Ley Creek and/or Onondaga Lake; 3) collect sufficient data to determine whether or not a Remedial Investigation/Feasibility Study is warranted for the site; and 4) collect the data necessary to perform Steps 1 through 2b of the Fish and Wildlife Impact Analysis (FWIA).

This section describes the tasks that will be completed at the Site during the PSA Site Investigation. Detailed specifications, procedures and methodologies are presented in the attached Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) (See Attachments 2 and 3, respectively). Health and safety protocols are described in the project Health and Safety Plan (HASP) provided as Attachment 4.

### **3.1 RECORDS REVIEW**

A detailed records review will be conducted to evaluate previous work performed by Crouse-Hinds and others, as well as pertinent public information regarding the Site and surrounding properties. Existing environmental reports will be evaluated in detail and data / findings will be summarized and placed on updated site maps. Aerial photographs, historical topographic maps and other resources will also be assessed. This review will allow InteGreyted to utilize existing information so that a focused, cost-effective PSA can be conducted.

### **3.2 SOIL INVESTIGATION**

#### **3.2.1 Test Pit Excavation**

A total of 19 test pits (8 on South Landfill and 11 on North Landfill) will be advanced

in fill material existing at both landfills to document the nature of fill and underlying soil (Figures 3-1 and 3-2). The majority of the test pits will be advanced at the perimeter of the waste mass in each landfill; however, several test pits at each landfill will be advanced within the interior areas of each landfill. Test pits will be advanced to the base of the fill material provided that this can be accomplished safely and within the limits of the equipment. InteGreyted's on-site geologist will log all test pits in detail. Soil and fill material exposed at each test pit will be placed in a sealed container pending field screening. After a period of approximately 10 minutes the headspace of the sampling container will be scanned with a photonization detector (PID) to screen for the potential presence of VOCs. Selected samples (i.e., one per test pit for a total of 19 soil samples) will be containerized and submitted for laboratory analysis. Excavated material will be placed back into the excavation upon completion unless grossly contaminated. If materials are grossly contaminated they will be staged, and covered with plastic pending proper management. The limits of each test pit and the location of each soil sample will be marked with stakes to allow for surveying.

### *3.2.2 Test Pit Excavation Soil Sampling*

Based on visual observations, odors and PID screening data, one soil sample per test pit (total 19) will be selected for laboratory analysis. Soil samples will be analyzed for VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), target analyte list (TAL) metals, cyanide and pesticides/PCBs (USEPA Method 8080) by a NYSDOH ELAP-certified laboratory that participates in the contract laboratory program (CLP).

Laboratory analytical procedures will adhere to NYS ASP 2000 methodologies and protocols. Additionally, ten soil samples from interior area test pits will be collected and analyzed for RCRA waste characterization parameters by the Toxicity Characteristics Leaching Procedure (TCLP).

Analytical results will be reported using NYSDEC ASP 2000 Category B deliverables (with the exception of TCLP analyses). Site-specific quality assurance/quality control (QA/QC) samples, including matrix spike (MS)/matrix spike duplicate (MSD) samples and field duplicates will also be collected/analyzed, as appropriate. To the extent

During drilling activities, soil samples will be logged by a geologist and field screened with a PID to monitor for the potential presence of VOC vapors. Continuous split-spoon soil samples will be collected at the deep boring of each proposed well pair and at the shallow well boring for the unpaired well.

Each of the monitoring wells will be constructed of two-inch-diameter PVC riser and ten feet of 0.01-inch slotted PVC well screen. The well screen in shallow wells will be installed to straddle the shallow water table. The well screen in the deep wells will be installed in the sand and gravel unit and the actual depth will be dependent on field observations during drilling.

A silica sand pack will be installed around the well screen in each well and will extend one to two feet above the top of the well screen. A one to two foot thick bentonite pellet seal will be placed above the sand pack and cement/bentonite grout will be utilized to backfill the remainder of the well annulus. The wells will be completed with a steel protective casing. Following installation, reference points will be marked on the top of the PVC at each well location to allow for surveying. All generated wastes (i.e., soil cuttings) will be staged on, and covered with, plastic sheeting pending proper management.

### *3.3.3 Well Development*

Well development will begin no sooner than 24 hours after final completion of each monitoring well. Low-flow purging and development techniques will be used to develop each of the newly installed monitoring wells. Each well will be developed until the turbidity of the water is below 50 NTU, and/or field parameters (pH, conductivity, and temperature) stabilize. Development water from the wells will be checked periodically for the presence of a sheen or free product. Development water will be discharged directly to the ground surface, unless there is visible evidence of impact. In the event that a sheen or free product is present, development water will be containerized pending proper management.

## **7.0 SCHEDULE**

Summarized below is a tentative schedule for completion of project milestones.

<b><u>Task</u></b>	<b><u>Completion Date</u></b>
Submission of PSA Work Plan to NYSDEC:	16 January 2004
NYSDEC Provides PSA Work Plan Comments to Cooper:	20 February 2004
Cooper Provides Response to NYSDEC Comments:	28 April 2004
Submission of Final PSA Work Plan to NYSDEC:	28 April 2004
NYSDEC Work Plan Approval / Work Authorized	21 May 2004
Begin Fieldwork:	7 June 2004
Finish Fieldwork:	2 July 2004
Receive Data from CLP Laboratory:	6 August 2004
Complete Data Validation:	27 August 2004
Submit PSA Report to NYSDEC:	30 September 2004
NYSDEC Provides PSA Report Comments to Cooper:	5 November 2004
Cooper Provides Response to NYSDEC Comments:	19 November 2004
Final PSA Report Provided to NYSDEC:	17 December 2004

This schedule is estimated, and NYSDEC review durations are assumed.

Existing wells will be repaired as needed, then carefully developed using low-flow techniques discussed in Section 2.3.3 below. Well development water will be discharged on-site. As part of this PSA, each of the existing monitoring wells will be purged and samples as discussed in Section 2.3.4 below.

### **2.3.2 *Monitoring Well Installations***

Five new wells will be installed at the Site: two well nests (consisting of a 20-foot well and a 50-foot well), and one additional shallow well. The borings for the five new wells will be drilled using 4.25-inch inside diameter (ID) hollow-stem auger (HSA) drilling techniques under the supervision of InteGreyted's on-site geologist. During drilling activities, samples will be logged by a geologist and field screened with a PID.

Continuous split-spoon soil samples will be collected at the deep boring of each proposed well pair and at the shallow well boring for the unpaired well. Estimated monitoring well locations are shown on Figure 3-1 of the PSA Work Plan.

Following completion of each well borings, a two-inch-diameter PVC monitoring well constructed of PVC riser and ten feet of 0.01-inch slotted PVC well screen will be installed in each boring to the desired depth. In the shallow wells, the well screen will be installed to straddle the water table. The well screen in the deep wells will be installed in the sand and gravel unit and the actual depth will be dependent on field observations during drilling.

A sand pack will be installed around the well screen and will extend two feet above the top of the screen. A one to two foot-thick bentonite pellet seal will be placed above the sand pack and a cement/bentonite grout will be utilized to backfill the remainder of the annulus. The monitoring wells will be completed with a protective steel casing and a concrete pad tapered to direct surface water away from the well. In high traffic areas, guard posts may be installed surrounding the well for protection. Following installation, reference points will be marked on the top of each well casing. A geologist will supervise all monitoring well construction activities and will prepare well construction logs.

## **1.0 INTRODUCTION**

This document represents the Quality Assurance Project Plan (QAPP), which is Attachment 2 of the Preliminary Site Assessment (PSA) Work Plan for the Cooper Industries, Inc., Crouse-Hinds Facility Landfills (i.e., North and South Landfills) site located in the Town of Salina, New York (hereinafter the "Site"). This Quality Assurance Project Plan describes the field and laboratory Quality Assurance and Quality Control measures to be implemented during the project. This QAPP was prepared in accordance with EPA's guidance document entitled "EPA Requirements for Quality Assurance Project Plans", which is dated March 2001.

Table 6-1  
PSA Sampling Program

Task	Matrix	VOCs (EPA Method 8260)	SVOCs (EPA Method 8270)	Pesticides /PCBs (EPA Method 8080)	TAL Metals	Cyanide	Phenols
<b>Soil Samples</b>							
Test Pits (19 total) #	Soil	19	19	19	19	19	NA
Surface Soil Samples (10 total)	Soil	10	10	10	10	10	NA
Duplicates (1 per 20)	Soil	2	2	2	2	2	NA
MS/MSD (1 set per 20)	Soil	2 sets	2 sets	2 sets	2 sets	2 sets	NA
Total Soil Samples	Soil	35	35	35	35	35	NA
<b>Sediment Samples</b>							
Sediment Samples (Ley Creek)	Sed	4	4	4	4	4	NA
Storm Sewer*	Sed	3	3	3	3	3	NA
Duplicates (1 per 20)	Sed	1	1	1	1	1	NA
MS/MSD (1 set per 20)	Sed	1 set	1 set	1 set	1 set	1 set	NA
Total Sediment Samples*	Sed	7	7	7	7	7	NA
<b>Water Sampling</b>							
Existing Wells	GW	14	14	14	14	14	14
New Wells	GW	5	5	5	5	5	5
Surface Water Samples	SW	4	4	4	4	4	4
Duplicates (1 per 20)	GW/SW	2	2	2	2	2	2
MS/MSD (1 set per 20)	GW/SW	2 Sets	2 sets	2 sets	2 sets	2 sets	2 sets
Trip Blank	Water	2	NA	NA	NA	NA	NA
Total Water Samples	GW	31	29	29	29	29	29

**Notes:**

#: Ten soil samples from interior area test pits will be collected and analyzed for RCRA waste characterization parameters by the Toxicity Characteristics Leaching Procedure (TCLP).

NA: Not Analyzed

\*: As many as three additional sediment samples may be collected depending on the results of the storm sewer assessment. These samples have not been included in the sediment sample total. Should the storm sewer be located during the PSA, up to three additional sediment samples will be collected. If collected, these samples will be included in the sample delivery group with the Ley Creek sediment samples such that additional QA/QC samples will be necessary.

1: The method quantification limits will be the lowest as required by the method.

2: The actual detection limit will be dependent upon the sample matrix.

3: Holding times, sample preservatives and sample containers will be specified by the analytical method.



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Appendix A: Community Air Monitoring Program

## **APPENDIX A**

### **COMMUNITY AIR MONITORING PLAN**

## **Community Air Monitoring Plan (Intrusive Activities)**

Continuous air monitoring for Volatile Organic Compounds (VOCs) will be conducted for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic air monitoring for VOCs will be conducted during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location.

### VOC Monitoring, Response Levels, and Actions

VOCs will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

#### Particulate Monitoring, Response Levels, and Actions

If dry and dusty conditions are present during site work and dust is generated, particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ( $\text{mcg}/\text{m}^3$ ) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed  $150 \text{ mcg}/\text{m}^3$  above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than  $150 \text{ mcg}/\text{m}^3$  above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within  $150 \text{ mcg}/\text{m}^3$  of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.